

REMARKS

Favorable reconsideration of the above-identified application is requested in view of the amendments made herein and the following remarks.

Claims 2, 4, 8, 22, 27 and 30 are canceled. Thus, Claims 1, 3, 5-7, 9-21, 23-26, 28, 29 and 31-33 are pending, with Claims 1, 7, 11-13, 17, 21, 26 and 29 being independent.

Claims 16 and 20 have been indicated as being considered allowable over the art of record.

A number of claim amendments are made herein. With the exception of claim 33, the claim amendments are merely movements of subject matter from dependent claims to independent claims and should not necessitate any new grounds of rejection.

INFORMATION DISCLOSURE STATEMENT:

An Information Disclosure Statement was filed on December 1, 2005. See the Image File Wrapper. The Examiner has not yet made the Information Disclosure Statement of record. The Examiner is respectfully requested to consider the information submitted therewith and to return an initialed copy of the PTO-1499 form to Applicants' attorney.

ART REJECTIONS:

Claims 1, 2, 6, 7 and 10-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 09-054664 to Satoshi, hereinafter *Satoshi*, in view of U.S. Patent No. 6,138,155 to Davis et al., hereinafter *Davis*. Claims 3-5, 8 and 9 are

rejected under 35 U.S.C. § 103(a) as being unpatentable over *Satoshi* in view of *Davis* and further in view of U.S. Patent No. 6,137,587 to Muto, hereinafter *Muto*. Claim 12 is rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,026,258 Fresk et al., hereinafter *Fresk*. Claims 13 and 17 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application No. 5,748,337 to Minamizawa, hereinafter *Minamizawa*. Claims 14, 15, 18 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Minamizawa* in view of *Muto*. Claims 21-23 and 25-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,184,996 to Gase, hereinafter *Gase*, in view of U.S. Patent No. 6,952,280 to Tanimoto, hereinafter *Tanimoto*. Claim 24 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Gase* and *Tanimoto* and further in view of *Muto*. Claims 31-33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Gase* and *Tanimoto* and further in view of U.S. Patent No. 6,897,972 Noda, hereinafter *Noda*.

Discussion of Application

One embodiment of the present application relates to determining priority for print jobs based on activity level at a terminal. Pages 2-3 of the present application discuss a situation where a plurality of print jobs is sent from a plurality of terminals to a single printer. An issue arises when some of the print jobs are more urgent than others. For example, a user could send a series of print jobs so that the first print job arrives at the printer while the user is still operating the terminal. A problem arises because a user who is at the printer may have to wait for an absent user's print jobs to print. Therefore, as described in the present application, it is desirable to detect

the current manual operating state of a terminal sending a print job to determine the proper priority of the print jobs, e.g., if the user is still at his/her terminal or in route to collect the print job.

Beginning on the bottom of page 16 of the present application, an embodiment of the claimed subject matter is described. According to that embodiment, when an input is received from an input means, i.e., when a user performs an operation such as manually pressing a key on the keyboard or moving the mouse, an operation information generating unit is notified that an operation has been performed. Upon receipt of such notification, the operation information generating unit generates a code "key" that indicates an operation has been performed and transmits such to the printer server. Thus, the time elapsed since the user last manually operated, i.e., generated a "key", at the terminal can be determined, from which it can thus be determined how likely it is that a user is in route to collect the print job. In other words, a user recently typing at a terminal is likely not in route to collect a print job, and that print job receives a low priority. In contrast, a user who has not been typing at a terminal for a longer period of time could be in route to collect a print job, and that print job is given a high priority. The previous description is not meant to limit the claims to the discussed embodiment.

Claims 1 and 7

Claim 1 is amended to include subject matter from Claims 2 and 4, and claim 7 is amended to include the subject matter of claims 4 and 8. Claims 1 and 7 now define in part that the priority determining unit sets higher priority levels for print jobs from terminals with longer nonoperational periods.

Those claims were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Satoshi, Davis, and Muto*. *Muto* is relied upon for an alleged disclosure of setting a higher priority level for a print job from a terminal with a nonoperational period that exceeds a specified value than for a print job from a terminal with a nonoperational period that is no more than the specified value. Specifically, Figure 17B and column 14, lines 31-32 are relied upon. However, contrary to the assertion of the Examiner, that portion of *Muto* teaches that priority is determined according to frequency of output processing within a predetermined period of time. See column 14, lines 16 – 18.

The frequency of output processing in *Muto* is not the same as the "nonoperational" periods in Claim 1. That is, the number of uses per a defined time (*Muto*) is not the same as a measurement of a period of a nonoperational period. For example, if the host computer in *Muto* incurs a large number of uses at the beginning of the predetermined period of time, and then incurs a large nonoperational period at the end of the predetermined period, the result would be a relative high frequency of use (i.e., an average throughout the predetermined period), notwithstanding the current, i.e., latest, large nonoperational period. In this example, the present invention according to claims 1 and 7 would be influenced by the large nonoperational period at the end of the predetermined period, whereas the *Muto* system would set the priority based on the *average* frequency of use. Accordingly, the two systems would likely yield different results in the hypothetical situation described above. Therefore, it is clear that *Muto* does not teach a controller that instructs the printer to process the plurality of print jobs in an order based on the determined priority levels; wherein the detector detects, as the piece of operation

information, a nonoperational period during which the terminal has not been operated; and ***wherein the priority determining unit sets higher priority levels for print jobs from terminals with longer nonoperational periods***, as set forth in claims 1 and 7.

Accordingly, claims 1 and 7 are patentable over the applied prior art. Claims 6 and 10 depend from claims 1 and 7 and are therefore also patentable.

Rejections of Claims 11 and 12 are rejected over *Satoshi* in view of *Davis*

Claim 11 defines in part: a timer that measures an elapsed time since an input device that includes the receiving unit was last operated.

Satoshi discloses a print handling method. It appears that *Satoshi's* goal is to finish printing data when desired by the operator of the data input device. With regard to the disclosed solution, priority values P are calculated and assigned to each print job. *Satoshi* further discloses that the priority values of: 1) received print data and 2) print data already stored in the RAM of the print spooler, are calculated with regard to: 1) the current time G, 2) print start time K, 3) print end time S, and 4) print time T. According to *Satoshi*, the priority value P is calculated by deducting a computed printing time amount T from the printing end time S given to the received printing data or the computed printing end time S, and deducting the current time G. Based on those factors, the print priority P for all the print jobs, including those just received, are calculated and saved in the RAM.

The Examiner alleges that element 8 in *Satoshi* is a timer for measuring an elapsed time since an input device 1 was last operated. However, applicants submit

that the element 8 does not measure an elapsed time since an input device 1 was last operated. According to the specification of *Satoshi*, element 8 is used to obtain the current time G. See paragraphs [0010] and [0014] of *Satoshi*. If the Examiner persists with the rejection of claim 11 based on *Satoshi*, the Examiner is respectfully requested to explain the basis for the conclusion that that element 8 in *Satoshi* is a timer for measuring an elapsed time since an input device 1 was last operated.

It is not clear from the Office Action to what extent the Examiner relies upon *Davis* for the rejection of claim 11. However, applicants submit that neither *Satoshi* nor *Davis* discloses a timer that measures an elapsed time since an input device that includes a receiving unit was last operated.

Davis discloses a method for monitoring client interactions with a resource downloaded from a server (Abstract). Column 9, lines 6-7, in *Davis* states that the tracking program may track some or all mouse and keyboard events to measure and chart which content on the internet is accessed, how long each are observed, and by whom. There is no measurement of an elapsed time since last operation of an input device.

Column 9, lines 6-7, in *Davis* describes detection of an operation of a mouse or keyboard, but does not discuss measurement of an elapsed time since last operation. Column 13, lines 25-51, in *Davis* describes timing periods between certain actions performed on a web page, e.g., accessing a web page by clicking a mouse, but that action of measuring how long a user views (downloads) a web page is not the same as measuring an elapsed time since an input device was last operated. For example, a user could have multiple web pages open at one time on a computer. The time elapsed since a user accesses one web page is not related to

the elapsed time since the same user accessed another web page. That is, the time viewing one web page, e.g., 5 minutes, would be measured irrespective of the user's actions (e.g., mouse clicks) on the other web page. In other words, *Davis* does not detect how long a user does not operate a terminal, and is only concerned with how long a user downloads or interacts with certain web content.

Claim 11 is allowable at least because neither *Satoshi* nor *Davis* disclose a timer that measures an elapsed time since an input device that includes the receiving unit was last operated.

Claim 12 defines in part a plurality of terminals and at least one detector that detects whether an operator is in a vicinity of *each* terminal.

The Examiner has not established a *prima facie* case of obviousness. The Examiner has not made an assertion that, either *Satoshi* or *Davis* discloses or suggests at least one detector that detects whether an operator is in a vicinity of each terminal. On the middle of page 5 in the Office action, the Examiner sets forth the rejection of Claim 12, however, that paragraph does not refer to a plurality of terminals and at least one detector that detects whether an operator is in a vicinity of each terminal. Thus, should the rejection of Claim 12, as being an obvious combination of *Satoshi* in view of *Davis* be maintained, the Examiner must explain how those references disclose or suggest, in combination with the other claimed features, at least one detector that detects whether an operator is in a vicinity of each terminal. Claim 12 is allowable because neither *Satoshi* nor *Davis* disclose that subject matter.

Rejection of Claim 12 as being anticipated by Fresk

Claim 12 defines a printer controller that receives print jobs transmitted from a plurality of terminals, and controls the printer to perform print processing. At least one detector detects whether an operator is in the vicinity of each terminal. A priority determining unit determines the priority levels for a plurality of print jobs waiting to be printed, and a priority level of a print job is determined based on a detection result produced by the at least one detector for a terminal that transmitted the print job. A controller controls the printer so that the plurality of print jobs is processed in an order based on the determined priority levels.

Fresk discloses a sensor for detecting the submission of a copy job to a copy machine 10 that may also serve as a printer. Column 2, lines 64 – 68. *Fresk* also discloses that the copy machine 10 may also function as a printer to a plurality of host computers 16, 22. When a walk-up user submits a copy job, a sensor detects the submission of the copy job and gives priority to such user over a distant terminal.

The Office Action identifies parts 16, 20 and 28 as being "terminals" in the context of Claim 12. However, part 16 is a computer that does not include a sensor for detecting presence of a user, part 20 is merely a network line (column 4, line 10), and part 28 is a copier user interface having a sensor. Clearly, a plurality of terminals and a detector for detecting whether an operator is in the vicinity of each terminal has not been pointed out in the Office action. Element 28 is part of the copier, and thus not a terminal. Furthermore, even if it was considered a terminal, *Fresk* does not disclose a sensor at each terminal. At best, *Fresk* discloses a sensor for detecting the submission of a copy job at the network copier/printer.

Fresk does not disclose at least a printer controller that receives print jobs transmitted from a plurality of terminals, and at least one detector that detects whether an operator is in the vicinity of each terminal. *Fresk* only discloses detecting the presence of a user who is standing next to and operating the copy machine 10 and is not capable of detecting the vicinity of a user to any of a host computer 16 or a portable electronic device 22.

For at least those reasons, Claim 12 is not anticipated by *Fresk* and the rejection should be withdrawn.

Claims 13 and 17 as being anticipated by *Minamizawa*

Claim 13 defines a printer controller that receives print jobs that are transmitted from a plurality of terminals, and instructs a printer to perform print processing. A memory stores each of the received print jobs in correspondence with information indicating a transmission origin terminal for each terminal. A first timer measures an elapsed time since reception of a most recent print job from each terminal. A priority determining unit determines a priority level for each terminal according to the measured elapsed times since reception of the most recent print job from each terminal. A controller instructs the printer to process the plurality of print jobs stored in the memory in an order based on the determined priority levels.

Minamizawa discloses a facsimile device having a print priority mode and a facsimile priority mode. In the print priority mode, the printing of facsimile transmissions is prohibited, and in the facsimile priority mode the printing of other print data is prohibited. One of the problems associated with devices of that sort is the potential for a user to leave the device in the print priority mode, thereby

preventing printing of facsimile transmissions. Accordingly, *Minamizawa* uses a "timing out" period, after which the device reverts from the print priority mode to the facsimile priority mode. That is, when the user selects the print priority mode, a first timeout period (e.g., five minutes) is allowed for receipt and printing of other data. After the period elapses without reception of other print data, the facsimile device reverts to the facsimile priority mode. If print data is received before the period elapses, a second timeout period is set **after** the completion of printing the print data (col. 1, lines 63 – 68). If no other print jobs are received during the second timeout period, the system reverts to the facsimile priority mode. As noted above, those operations prevent the device from being left in the print priority mode thereby preventing printing of facsimile transmissions.

The only two things that are timed by *Minamizawa* are (1) the time between setting the print priority mode and receipt of a print job during the first timeout period, and (2) the time between **completion** of printing a print job and receipt of a next print job (from any source) during the second timeout period. *Minamizawa* does not teach timing of an elapsed time since **reception** of a most recent print job from each terminal. Column 1, lines 54 – 67. In the present invention, elapsed time since reception is more important than elapsed time since completion, since the timing of reception reflects usage at a terminal by a user. In addition, contrary to the assertions of the Examiner, *Minamizawa* does not disclose origin terminal information and is not concerned with identification of the terminal that sent print data. It does not store terminal information with the print data.

The Examiner asserts that *Minamizawa* discloses a memory that stores each received print job in correspondence with information indicating a transmission origin

terminal and specifically identifies Figure 3 in *Minamizawa* showing a FAX RAM 84 and a PRINT RAM 94. However, that portion of *Minamizawa* does not teach obtaining information of an original terminal that transmitted a job. The FAX RAM 84 and PRINT RAM 94 does not relate to information for specifying individual terminals, but simply for identifying whether a terminal is a fax machine or a printer (see the detailed description above). Thus, the characterization in the Office action is not correct and it is requested that the rejection be reconsidered.

For the foregoing reasons, Claim 13 is not anticipated or suggested by *Minamizawa*.

Claim 17 is allowable for similar reasons as set forth above with regard to Claim 13, with regard to similar claim language.

Claims 14, 15, 18 and 19 as being obvious over *Minamizawa* in view of *Muto*

Claims 14, 15, 18 and 19 depend from claims 13 and 17. However, *Muto* is only relied upon for its alleged teaching of setting priorities, and thus does not overcome the deficiency of the rejection of claims 13 and 17 based on *Minamizawa* that is set forth above.

Claims 21-23 and 25-30 over *Gase* in view of *Tanimoto*

Claims 21, 26 and 29 are amended to include subject matter from Claims 22, 27 and 30, respectively.

Claim 21 now recites, among other features, wherein the piece of print processing information relates to a current manual operation state of the

transmission origin terminal, and the piece of print processing information is a piece of processing priority information indicating a processing priority level of a print job.

A *prima facie* case of obviousness has not been established for Claim 21. The Examiner does not point out or explain where or how either *Gase* or *Tanimoto* discloses or suggests the subject matter relating to a current manual operation state. Upon review of the rejection, the rejection set forth for the amended Claim 21, which recites in part "manual operation state", is identical to the rejection set forth for the earlier version of Claim 21. The Examiner's attention is directed to the remarks concerning this rejection that were submitted on August 28, 2006. Under rule 707.07(f), the Examiner is required to address all arguments raised by an applicant in the next action. In this case, the Examiner has failed to consider and address the August 28, 2006 remarks. Accordingly, the Office Action is improper. In order for the Examiner to maintain the rejection, the Examiner must address applicants' arguments. Therefore, the rejection must be withdrawn, or it must be explained how the cited documents disclose or suggest the subject matter relating to a manual operation state as recited, together with the other features, in Claim 21.

Also, as noted in the previous response, review of *Gase* and *Tanimoto* reveals that neither relates to or discloses a current manual operation state of a transmission origin terminal.

Gase discloses a network printer with a remote print queue control procedure. A number of client processors 10, 12 are connected to a printer 14 via the internet WWW. Both the client processors 10, 12 and the printer 14 include a browser procedure 18 and a server procedure 20. Each client processor 10, 12 includes an application 22 which may have a print job ready for submission to printer 14. A print

job is delivered to the printer by sending a URL from the client processor 10, 12 to the printer 14. Once the printer 14 receives the URL, the printer 14 uses the browser procedure 26 to respond to the received URL by accessing, via the WWW, the print job present in the application 22 that is designated by the URL. The application 22 could be in any client processor connected to the WWW. When the print job is accessed, the client processor then responds with the text of the print job, which is delivered to and printed by the printer 14. The printer 14 further includes a job queue 28 which lists the URLs of received print jobs. Before printing the print job, the corresponding URLs are stored in the job queue 28. The job queue 28 is managed by a queue manager 32 which maintains status data, and controls the position of each of the URLs listed on the job queue 28. A job detail page enables the originating client processor to exert control over job queue 28 and the details of the specific job URL. By clicking one of the entries on the job detail page, alterations can be made to: the identity of the job indicated, the state of the job, the number of pages to be printed, the URL of the job, the job description, the owner of the job, and the number of copies to be printed. The queue position of a client processor's URL listed may be changed by operating a change button 60. However, in order to modify the queue position of a client processor's URL, the client processor must have been previously provided with a higher assigned priority level which enables its print jobs to enjoy a higher priority status than other print jobs on job queue 28.

Tanimoto discloses a network printing apparatus that uses designated print paper only for print jobs from a designated client or for a specific job. The Background of the Invention section of *Tanimoto* describes a problem involving the inability of users to use a network printer to print on special kinds of paper. That is,

when a user loads a special kind of paper, it is not possible to prevent other user's print jobs from being printed on that paper. Therefore, *Tanimoto* discloses designating a special paper for use only with a designated client or designated print job, thereby excluding all other clients or print jobs from using the special paper.

Neither *Gase* nor *Tanimoto* disclose the subject matter relating to a piece of print processing information that relates to a current manual operation state of a transmission origin terminal or wherein the piece of print processing information is a piece of processing priority information indicating a processing priority level of a print job. That is, *Gase* only discloses that the URLs are used to retrieve print jobs, and not that the print jobs include any information relating to the current manual operation state of the transmission origin terminal. *Tanimoto* only discloses determining the identity of the client that sent the job, or what specific job is being sent, and does not relate to information that relates to a current manual operation state of a transmission origin terminal. That is, *Tanimoto* only identifies the client processor, not its manual operation state.

Also, neither *Gase* nor *Tanimoto* teaches or suggests that the printer send a request to a terminal to request information, wherein the piece of information relates to a current manual operation state of the terminal **and** which indicates a processing priority level. The Examiner refers to column 3, lines 33 – 36 of *Gase*. However, that portion describes that the terminal can be used to move the URL on the printer queue. It does not describe using information relating to a current manual state of operation to determine priority.

For at least these reasons, Claim 21 is allowable.

Claims 26 and 29 are allowable for similar reasons as set forth above with regard to Claim 21.

Claim 24 as being obvious over *Gase* and *Tanimoto* in view of *Muto*

Claim 24 depends from claim 21. However, *Muto* is only relied upon for its alleged teaching of setting priorities, and thus does not overcome the deficiency of the rejection of claim 21 based on *Gase* and *Tanimoto* that is set forth above.

Claims 31 - 33 as being obvious over *Gase* and *Tanimoto* in view of *Noda*

Claims 31 – 33 depend from claims 21, 26, and 29, respectively. However, *Noda* is only relied upon “because the user manually initiates the print job”. However, such manual initiation does not relate to information for setting priorities, and thus *Noda* does not overcome the deficiency of the rejection of claims 21, 26, and 29 based on *Gase* and *Tanimoto* that is set forth above.

Conclusion


For the reasons stated above, it is requested that all the rejections be withdrawn and that this application be allowed in a timely manner.

Should any questions arise in connection with this application, or should the Examiner feel that a teleconference would be helpful in resolving any remaining issues pertaining to this application, the undersigned requests that he be contacted at the number indicated below.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: February 13, 2007

By: 
William C. Rowland
Registration No. 30,888

P.O. Box 1404
Alexandria, VA 22313-1404
703 836 6620